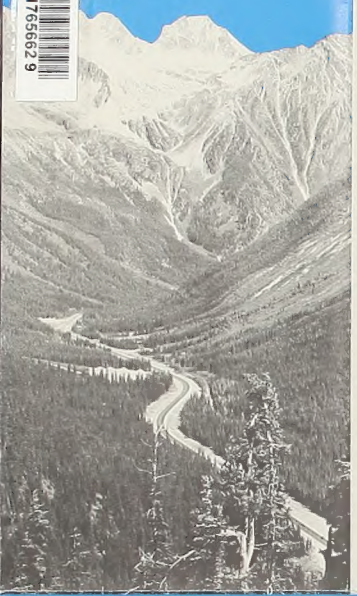
Glacier

NATIONAL PARK
BRITISH COLUMBIA



Glacier

NATIONAL PARK
BRITISH COLUMBIA

Glacier National Park preserves a 521-square-mile area of the Selkirk Range, one of the four interior ranges of British Columbia. The Selkirk and its related ranges—the Purcell, the Monashee and the Cariboo—are quite distinct from the Rocky Mountains, which are to the east, separated from the Interior Ranges by the Rocky Mountain Trench, through which the Kootenay, Columbia, Canoe and Fraser Rivers flow. River valleys extending south and southwest define the four Interior Ranges. The Beaver River valley, near the eastern boundary of Glacier National Park, forms the dividing line between the Purcell Range and the Selkirks.

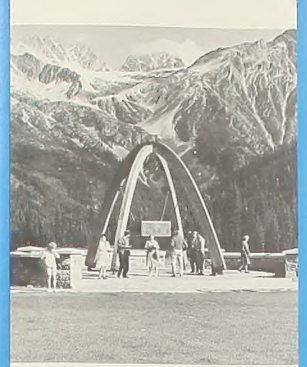
The park is both on the main line of the C.P.R. and on the Trans-Canada Highway. Since there is no scheduled stop at Glacier, rail passengers who wish to visit Glacier have to detrain either at Field in Yoho National Park or at the city of Revelstoke, about 30 miles from the park's western entrance. Most persons see Glacier from the Trans-Canada Highway which passes through the central part of the park and is open all year. Other National Parks in the vicinity are Mount Revelstoke near Revelstoke and Yoho and Banff National Parks which are in the Rockies to the east.

To orient yourself in Glacier, refer to the map on the reverse side of this folder. This map identifies the main features of the park for your information and guidance.

PURPOSE

Glacier National Park was established to preserve an unique mountain area complete with all its natural features in a natural state for the appreciative use of the public.

It is one of the 18 National Parks of Canada, which have a total area of 29,000 square miles. All National Parks are administered by the National and Historic Parks Branch, Department of Indian Affairs and Northern Development and are exclusively under the jurisdiction of the federal government.



The building of the Trans-Canada Highway is commemorated by this memorial near Rogers Pass. The two arches of Douglas Fir span a map of Canada on mosaic tile while the three low walls surrounding the map symbolize the Arctic, Pacific and Atlantic Oceans.

GEOLOGICAL FEATURES

The Selkirk Mountains were formed many tens of millions of years before the Rockies, which are about 75 millions of years old. Thus they have been exposed to weathering processes longer and much of the softer rocks has crumbled away, leaving the higher levels of the mountains composed of more solid rock. In appearance the peaks of the Selkirks are narrower and more jagged than the Rockies.

The many changes to which the rocks have been subjected in the millenia and the complete lack of fossils make it extremely difficult to reconstruct the history of these mountains. Geologists have identified two main groups of rocks—the Horsethief Creek group, probably Precambrian, and the Hamill group, perhaps Cambrian (550 million years old).

The Horsethief Creek rocks, in the eastern part of the park, consist of slate, hard quartzite, conglomerate, limestone and a flinty material known as breccias. The younger Hamill rocks, found elsewhere in the park, are mostly quartzite in pale green, pale pink and white.

While the rocks hide well the story of their origin, the effects of the great flowing sheets of ice that give the park its name are obvious everywhere. The Illecillewaet Valley through which the highway and the railroad pass was at one time filled with glacial ice which was deep enough to carve the angular sides of Mount Sir Donald's 10,818 ft. summit.

There are more than 100 glaciers in the park. Two are obvious and easily reached by trail—the Illecillewaet and the Asulkan. From the site of the old Glacier House it is a two-mile walk to Glacier Crest, a point which overlooks the Illecillewaet Glacier and Icefield, and a six-mile walk to the shoulder of Mount Abbott where the Asulkan Glacier can be observed. Although scientific observations have not been carried out regularly on all glaciers of the Selkirks, it is probable that all the glaciers are receding, i.e., the slight annual forward flow of the glaciers does not compensate for the much greater loss of volume of the ice through melting. The Illecillewaet Glacier was first studied in 1887 when it was about 3,000 feet long and known as the Great Glacier of the Selkirks. Today it is a pathetic relic of the Ice Age, barely 1,000 feet long and dwindling away at the rate of about 50 feet a year. The Asulkan Glacier is even smaller.

An excellent geological guidebook to both Glacier and Mount Revelstoke National Park, priced at $1.50, is available by mail from the Queen's Printer, Ottawa, and may be purchased at the park administration office at Revelstoke.

FLORA

During the railroad construction, much original forest was destroyed by fire. However, the climate of Glacier, particularly its heavy precipitation, encourages luxuriant growth so that below timberline the underbrush is impenetrable.

In the valleys there is some black cottonwood but as you climb higher the forest composition is mainly western and mountain hemlock, Engelmann spruce and subalpine fir, with some giant cedar. The alpine fir becomes dominant as timberline is approached.

The ground cover is creeping raspberry, dwarf dogwood, many kinds of ferns and small herbaceous plants such as the saxifrages and the queen's cup. Where more sunlight filters through the forest canopy, hundreds of white-flowered rhododendrons grow. This is the most common wild flower of the Selkirks. Also in the forests are very dense thickets of immature evergreens, blueberry, currant and thimbleberry bushes and devil's club.

Wild flowers include the avalanche lily, western pasque-flower, Indian paintbrush, blue lupine, mountain marigold, wild heliotrope, yellow arnica, red mountain and white moss heather.

The heavy snowfall of Glacier National Park, averaging 342 inches, does not make the park an ideal range for large mammals and only rarely will a visitor sight anything larger than a ground squirrel. There are some black bears and a colony of 20 or so grizzly bears uses the park as a refuge. The grizzlies are shy and seldom appear near the highway; sometimes they are seen in isolated areas of the park. The usual small mountain animals are present, such as the Columbian and golden mantled ground squirrel, the marmot, the pika and the chipmunk.

BIRDS

Although a number of species have been observed in Glacier, the bird life is not numerous and remains well hidden from observation in the heavy undergrowth. Only during August are birds evident in the park. The Steller's jay is fairly common and other birds include the hermit thrush, winter wren, golden-crowned kinglet and chestnut-backed chickadee.

FISHING

Glacier is not a good place for fishing because the streams are filled with glacial silt and there are no lakes in which a fish population can be supported. In late summer or early fall, Dolly Varden trout may be caught in the streams although they are never large. A $2.00 fishing licence is required for use in the park; this can be obtained from a park warden.

HIKING

A fine network of trails, originally built by the C.P.R., leads to the Illecillewaet Glacier and to Asulkan Glacier. There are fine viewpoints from the ridge of Mount Abbott. About a mile east of Rogers Pass, a trail leads upward to the Hermit hut of the Alpine Club of Canada (open only to members of the A.C.C.). A few hundred feet above this hut is a beautiful alpland enclosed in a large natural ampitheatre. Trails lead up Bear and Cougar Creeks to Cougar Valley where the Caves of Cheops or the Nakimu Caves are located. The caves are closed to the public and entry is prohibited.

Most of the trails that are used by the public involve relatively short hikes and it is not advisable to make longer, overnight trips into the park without careful preparations. Before contemplating any hiking, you should purchase a topographical map of the park for 50 cents at the park office or by mail from the Map Distribution Branch, Department of Energy, Mines and Resources, Ottawa.

All hiking and mountaineering parties should check out with a park warden before leaving so that he will know of their routes and objectives in the event of their being lost or sustaining injury.

MOUNTAINEERING

Glacier National Park is one of the finest climbing areas in the world. There are about 100 major peaks to ascend, none of them requiring long approaches, and the rock is firm and hard to the grasp. The idea for the founding of the Alpine Club of Canada was formulated here and from 1887 on many of the famous mountaineers of the world came to Glacier.

Each of the peaks of the Sir Donald Group is a day's climb from the Illecillewaet campground by careful route selection; however, Sir Donald can take as long as 20 hours for the ascent and descent. Other popular ascents are those peaks of the Hermit Group.

There are no mountaineering guides at Glacier and all climbing equipment and supplies must be brought in. However, the National Parks Service employs a mountaineering specialist to advise climbing parties. All mountain climbing must be registered with the mountaineering specialist or a park warden before leaving and all parties must also report their safe return. Failure to follow these simple precautions may endanger you or, at least, involve the expense of a search and rescue party.

"A Climber's Guide to the Interior Ranges of British Columbia" by J. Monroe Thorington is the recommended source of information for those who plan to climb in Glacier National Park.

ACCOMMODATION

There are two small campgrounds in the park, Illecillewaet and Loop Creek. A large campground is being developed at Mountain Creek and is being opened for public use gradually. There are no electrical or sewage disposal connections for trailers in the campgrounds. Communal kitchen shelters, free firewood, and flush toilets are provided. Camping charges are $1 a day. Campgrounds normally are open from June until October.

For visitors who wish to rent accommodation, the Northlander Motor Lodge is conveniently located on the Trans-Canada Highway in Rogers Pass. The lodge operates a cafeteria, dining room and gas station and is open the year round. In the winter, a small ski development with two rope tows is operated by the lodge on slopes of Mount Cheops Minor, a short walk from the lodge. Requests for reservations and other inquiries should be directed to the Manager, Northlander Motor Lodge, Glacier National Park, B.C.

Reservations for camping space cannot be accepted nor can the National Parks Service undertake to arrange for commercial accommodation.

SEASONS

The Trans-Canada Highway through the park is open all year and the park is never closed to the public. However in a region with such a heavy snowfall, the period during which campgrounds are open for comfortable use by the public is short. Deep snow may linger at high elevations until late June and often delays the opening of campgrounds.

There is heavy precipitation during the summer months so persons visiting the park should be prepared for damp, chilly weather and dress accordingly. Weather in this part of the Selkirks is quite unpredictable but August and September are often fine months.

HOW YOU CAN HELP

Because Glacier is a National Park, preserving a large area in its natural state, the co-operation of the public is required. By following a few simple rules, you can play a part in preserving this park for the enjoyment of others and assist the National Parks Service to protect you and your property.

All birds, mammals, trees, rocks, and wildflowers should not be disturbed in any way or removed from the park. Hunting and trapping are prohibited. Show respect for the park's natural features by observing them with appreciation and then leaving them, unmolested and undisturbed, for others to enjoy.

Do not feed, or approach too closely to, bears and other large mammals, even if you are in a car.

Remember to check out with a warden before going mountain climbing or on an overnight hike and report back to him on your return.

Don't light wood fires except in the fireplaces provided for this purpose. Campfires must be completely extinguished before you leave a campsite or picnic area. If you see an unattended fire, extinguish it immediately and report it promptly to the first park employee you see. A forest fire could devastate the park and all its natural features so badly that it would take more than 100 years for its beauty to be restored by natural processes.

PETS

Dogs and cats may be brought into the park by their owners. Dogs should be kept on a leash in the park to prevent their annoying wild animals and other visitors.

MOTOR LICENCE

All motor vehicles entering Glacier National Park must bear a park motor vehicle licence. This is sold at $2, or $3 if the vehicle is towing a trailer, at the entrance to the park and is valid for an unlimited number of entries into all National Parks for a 12-month period. Licences purchased previously at Banff, Yoho and other National Parks where a $2 licence is required are honoured at Glacier.

Possession of a park motor vehicle licence is required for all vehicles passing through Glacier National Park even though the vehicles are being driven along the Trans-Canada Highway to a destination outside the National Parks. Information on fees payable by the drivers of buses and trucks may be obtained from the park gateway attendant.

Cougar Valley and Mount Bagheera.

AVALANCHE CONTROL

One of the unpleasant natural features of Glacier National Park is its avalanches which in winter cascade tons of snow down the steep mountain slopes which rise on each side of Rogers Pass. Although you probably will never see an avalanche in Glacier, their tremendous power can be imagined when you look up from the highway at a slope that is scraped clean of all trees and shrubs or catch a glimpse of a tangled mound of trees, bushes, rock rubble and dirty snow on the roadside.

There are 74 avalanche paths threatening the Trans-Canada Highway in Glacier National Park. As you drive through the park, you will pass through six concrete snowsheds which protect the highway and its traffic at the most dangerous points. An avalanche will run out over the top of one of the snowsheds instead of piling its tons of snow on the highway. On flatter slopes you will notice mounds of gravel fill about 15 to 25 feet high which are arranged in a definite pattern. These too are avalanche defences, designed to break up the avalanche into a number of smaller slides and slow it up before it reaches the highway.

The National and Historic Parks Branch has the difficult task of maintaining the Trans-Canada Highway through Glacier during the winter and operates an avalanche prediction and warning station. Observations made by this station enable avalanches to be spotted and brought down deliberately by artillery fire under controlled conditions so that there is no danger to motorists using the highway.

Mount Catamount and its glacier are seen from the top of Beloo Pass.

HISTORY

Since the Indians have left no artifacts in Glacier National Park, it is reasonably sure that they only passed through Rogers Pass occasionally on trips to better hunting grounds. With its difficult weather conditions, its dense undergrowth and its lack of game, the area would not have appealed to anyone seeking a secure and comfortable camping site.

The first men to see the Selkirks were fur-traders and the explorer David Thompson who used the Howse Pass to cross the Rockies. For fifty years the Selkirks were accepted as an impenetrable obstacle to further overland travel to the west and the Columbia River was used to bypass this mountain barrier.

The range was named, probably by Hudson's Bay Company travellers, after Thomas Douglas, 5th Earl of Selkirk. In 1881 Major A. B. Rogers, an U.S. citizen in the employ of the C.P.R., climbed the slope of Avalanche Mountain with his nephew and some Kamloops Indians and discovered the pass which would become the route of the C.P.R. At the same time he named the present Mount Sir Donald "Syndicate Peak" after the group formed to build the C.P.R. In 1883 Sir Sandford Fleming and Rev. G. M. Grant followed the uncompleted line of the C.P.R. from Lake Superior to the Pacific, stopping in Rogers Pass to found the Alpine Club of Canada.

The building of Glacier House, a comfortable lodge-like hotel of 36 rooms, followed a year after the C.P.R. was finished in 1885. From 1887 to 1925, this hotel had an international reputation and attracted most of the world's leading mountaineers, naturalists, and geographers who contributed much to the knowledge of the Selkirks by their climbs, explorations and writings. In its finest days, Glacier House was close to the tracks but, due to the continual damage and loss of life by avalanches, the C.P.R. moved its route out of the pass by piercing the five-mile-long Connaught Tunnel through Mount MacDonald in 1915. After that patronage declined and the hotel was closed in 1925 and demolished in 1929. Its site and some of its foundations may still be seen near the Illecillewaet campground.

A railway town of 300 persons existed in Rogers Pass from 1885 to the time of the re-routing of the railway. This town apparently survived avalanches although the tracks on both sides were overwhelmed frequently. Most tragic of the avalanche accidents in Rogers Pass was the sudden death of 64 railway workers on March 10, 1910. While digging through one avalanche, the workers were trapped by another huge stream of snow which fell from the other side of Rogers Pass and died instantaneously.

After the closing of Glacier House, Glacier National Park was all but forgotten except by the hundred or so avid mountaineers who came to the park by train, transporting all their equipment and supplies.

The Nakimu Caves, a series of subterranean passages in Cougar Valley, were discovered by C. H. Deutschman in 1900 and, while Glacier House was fully operating, were developed as a sightseeing attraction by the C.P.R. In 1935 the caves were officially closed as a safety measure. At present it is dangerous to enter the caves, even with special equipment such as safety lights and ropes and visits to the caves are prohibited.

In 1962, the completion of the Golden-Revelstoke section of the Trans-Canada forged the final link in a transcontinental highway spanning Canada from St. John's, Newfoundland, to Victoria, B.C. A memorial to this achievement was unveiled on Sept. 3, 1962, by Rt. Hon. John Diefenbaker, the Prime Minister of Canada, and is a popular stopping place for tourists, passing through the park.

On the Trans-Canada Highway via Rogers Pass to Connaught on the east of the divide, one passes through an alpine wonderland. To the west are the impressive peaks of Mt. Cheops, Ursus Major, Ursus Minor, Mt. Grizzly, Sifton, Rogers, the Swiss Peaks and Mt. Tupper. To the south east are the giants of the Sir Donald Range including Sir Donald, Eagle Peak, Mt. Avalanche and Mt. Macdonald whose massive height overshadows the pass.

The eastern section of the park, consisting of the watershed of the Beaver River and the Purcell Trench, is characterized by its more rounded contours and wide, timbered mountain benches. The Trans-Canada Highway extends up the valley as far as Connaught, and a good trail from Stoney Creek leads to the head of the Beaver and the Duncan Summit. Another follows Grizzly and Copperstain Creeks to the broad plateau of Bald Mountain. The latter commands a superb view of the Sir Donald, Dawson, Bishop and Purity Ranges to the west and south. The Spillimachene and Dogtooth Mountains can be seen to the east. Northward one can view a veritable sea of mountains which include such notable peaks as Mt. Sorcerer, Iconoclast, Nordic Mountain and many more.

The Trans-Canada Highway also gives access to the western areas of the park, where trails lead to Flat Creek Pass, overlooking the valley of the Incommappleux River to the south and west and north to Bostock Creek summit and to Mountain Creek.

The following is a list of the principal trails in the park with their locations and length in miles:

NAKIMU CAVES AND COUGAR VALLEY:	From Glacier westerly to the Nakimu Caves and Upper Cougar Valley; 8 m.
HERMIT TRAIL:	From Rogers Pass to Alpine Club hut on Hermit mountain; 2 m.
BALU PASS:	From Upper Cougar Valley to Rogers Pass; 4 m.
MOUNT ABBOTT:	From Glacier to Marion Lake and shoulder of Mt. Abbott; 6 m.
ASULKAN PASS:	From Glacier south along Asulkan Brook; 7 m.
GLACIER CREST:	From Asulkan Trail to point overlooking the Illecillewaet Glacier; 2 m.
GREAT GLACIER:	From Asulkan Trail south-easterly to the foot of the Illecillewaet Glacier; 2.5 m.
SIR DONALD:	From Glacier south east on the north side of the Illecillewaet River, to the base of Mt. Sir Donald; 3.5 m.
AVALANCHE CREST:	From Glacier to base of Mt. Avalanche; 5 m.
BEAVER RIVER:	From Stoney Creek south to Beaver–Duncan summit and south boundary of park; 30 m.
GRIZZLY CREEK AND BALD MOUNTAIN:	From Stoney Creek easterly via Grizzly and Copperstain Creeks, to Spillamachene Divide and Bald Mountain; 12 m.
FLAT CREEK:	From Flat Creek warden's cabin, south to head of Flat Creek; 6 m.
BOSTOCK CREEK:	From Flat Creek warden's cabin, north-westerly to Bostock Summit; 7 m.
INCOMAPPLEUX RIVER:	From Flat Creek Pass, south along Slick Creek to Incomappleux River and the south boundary of park; 7 m.
MOUNTAIN CREEK:	From Bostock Summit to Mountain Creek; 9 m.

Glacier National Park was established in 1886 and has a claim for the honour of being the oldest National Park in Canada since Banff was not enlarged and given official park status until 1887. It was administered as part of Yoho National Park until 1957 when Glacier and Mount Revelstoke were combined under the administration of a single superintendent whose headquarters is in Revelstoke. The official address of the park is: Superintendent, Glacier National Park, Revelstoke, B.C.

Published under the authority of
HON. ARTHUR LAING, P.C., M.P., B.S.A.
Minister of Indian Affairs and Northern Development

Roger Duhamel, F.R.S.C.
Queen's Printer,
Ottawa, 1967

386-5